

Remarks/Arguments

The specification and drawings have been amended.

The Examiner has objected to the Disclosure due to a minor error on page 12 of the specification. Applicant has amended the specification as above set forth to correct this error. The Examiner's objection has thus been obviated.

The Examiner has objected to the drawings and requested that FIGS. 1-3 and 9 be labeled as "--Prior Art-- because only that which is old is illustrated." Applicant has included herewith a drawing change amending FIGS. 2 and 9 with the legend "Prior Art."

With respect to FIGS. 1-3, the Examiner's objection is traversed. More particularly, the control operation shown in applicant's FIG. 4 has been incorporated into one of the steps (step 302) of the control operation shown in applicant's FIG. 3, which control operation is used in the microcomputer 115 of the system shown in applicant's FIG. 1. Accordingly, FIGS. 1 and 3 so viewed are not "that which is old" and, therefore, need not be labeled as "Prior Art."

The Examiner has rejected applicant's claims 1-4, 6-11 and 17-25 under 35 USC 102(b) as anticipated by the Nakamura patent. This rejection is respectfully traversed.

Applicant's invention of independent claim 1 is directed to an apparatus including a focus adjusting system and a driving device which drives the focus adjusting system from one of a state in which a near-distance object is in focus and a state in which a far-distance object is in focus to the other. Applicant's independent claim 1 further recites a control device which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination

repeatedly performed reaches a predetermined number of times, restrains the focus adjusting system from being driven in the one direction. Applicant's independent apparatus claim 20, independent focus adjusting method 24 and independent computer program product claim 25 recite similar features. Such constructions are not taught or suggested by the cited art of record.

The Examiner has argued as follows with respect to the Nakamura patent:

"Nakamura teaches a focus adjusting system (fig. 1 element 2), a driving device (motor 6), and a control device (1, 21) which repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number of time, restrains the focus adjusting system from being driven in the one direction (col. 5, lines 30+; col. 3, lines 2+; see fig. 4, steps S001-S005 and S201, discussion on col. 7, lines 20+)."

Applicant disagrees. More particularly, the Nakamura patent teaches focus control based on the focusing variation values A and R. These values are determined from a gradient value a and an intercept value b . The values a and b are determined from sampled focus evaluation values using the method of least squares (see, equation 1 and equation 2 in column 6 of the Nakamura patent). The focusing variation value A is set at the calculated gradient value a , while the focusing variation value R is calculated as a residual sum of squares from the values a , b , and the sampled focus evaluation values.

Nakamura further teaches sampling the focusing variation values A and R in a step S004 and if the sampled focusing variation value R exceeds a predetermined value in a step S005, temporarily stopping focusing in a step S201. (see, column 6, lines 57-63 and column 7, lines 21-28, of the Nakamura patent). The Nakamura patent also teaches that if the sampled

focusing variation value A is negative and its magnitude exceeds a predetermined value, moving the focusing lens in the opposite direction (see, column 6, lines 50-56, and column 7, lines 50-57 and lines 39-41 of the Nakamura patent).

The Nakamura patent thus teaches temporarily stopping or moving the focus lens in the opposite direction based on the level of the sampled focusing variation values relative to predetermined values. There is, therefore, no teaching or suggestion to restrain the focus lens based on the number of times that a determination of a focus state is repeatedly performed. As stated, in the Nakamura patent, it is the level of the sampled focus variation values that is used to control the focus not the number of times that a focus state determination has been made.

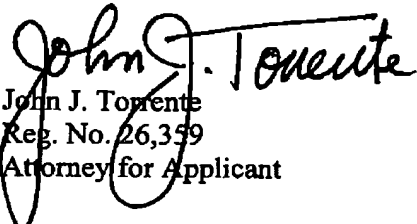
Applicant's independent claims 1, 20, 24 and 25, and their respective dependent claims, in reciting such feature in one form or another, thus patentably distinguish over the Nakamura patent.

In view of the above, it is submitted that applicant's claims, as amended, patentably distinguish over the cited art of record. Accordingly, reconsideration of the claims is respectfully requested.

Dated: May 13, 2004

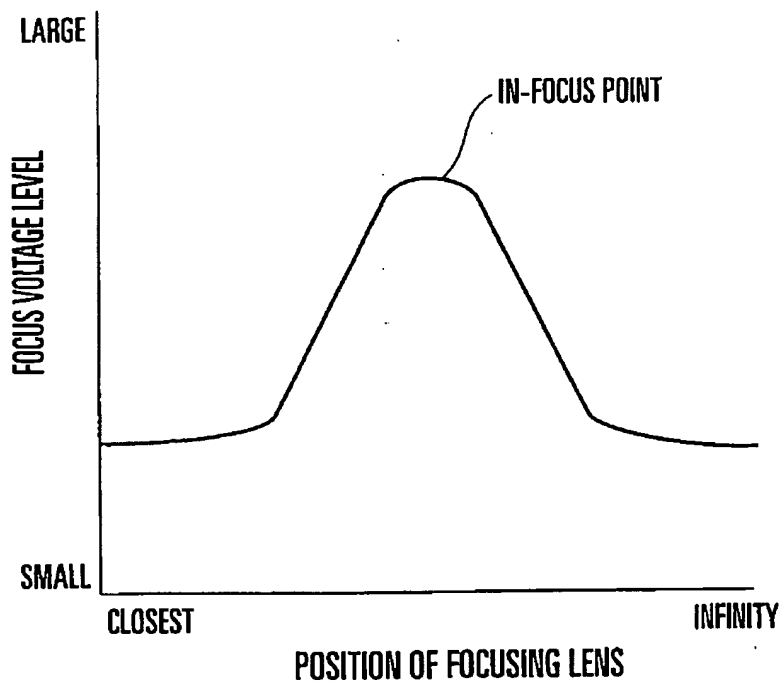
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Annotated Drawing Sheet 1 of 2
Showing Changes Made
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FIG. 2
(PRIOR ART) *label added*



Annotated Drawing Sheet 2 of 2
Showing Changes Made
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FIG. 9 (PRIOR ART)

